

Abstract

A wavelength converting method and device, and a laser machining device using the method and the device which realize generating a light that has been wavelength-converted by a non-linear optical crystal stably for a long period of time.

In the wavelength converting method, an atmosphere that is in contact with a surface of the non-linear optical crystal from which the wavelength-converted light is outputted is a gas that is smaller in the content of nitrogen elements than air, and the wavelength conversion is conducted in the atmosphere. Also, the wavelength converting device is provided with a device for setting an atmosphere that is in contact with a surface of the non-linear optical crystal from which the wavelength-converted light is outputted to a gas that is smaller in the content of nitrogen elements than air. The laser machining device includes the above wavelength converting device.